

## DOCUMENT RESUME

05370 - [B0945851]

Environmental Protection Agency's Construction Grant Program: Stronger Financial Controls Needed. CED-78-24; B-166506. April 3, 1978. 41 pp. + appendix (2 pp.).

Report to Douglas Costle, Administrator, Environmental Protection Agency; by Henry Eschwege, Director, Community and Economic Development Div.

Issue Area: Environmental Protection Programs: Federal Controls Over Wastewater Treatment Construction Grant Funds (2202).

Contact: Community and Economic Development Div.

Budget Function: Natural Resources, Environment, and Energy: Pollution Control and Abatement (304).

Congressional Relevance: House Committee on Public Works and Transportation; Senate Committee on Environment and Public Works.

Authority: Federal Water Pollution Control Act Amendments of 1956 (P.L. 84-660; 70 Stat. 498). Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500; 33 U.S.C. 1251). P.L. 94-447. OMB Circular A-102.

Federal Water Pollution Control Act Amendments authorized grants for constructing wastewater treatment facilities to prevent untreated or inadequately treated sewage and other waste discharges into waterways. Grant recipients or grantees (State, municipality, or intermunicipal or interstate agency) can receive up to 75% of the funds from the Federal Government. Because of the magnitude of Federal funds being spent for constructing waste treatment facilities and the potential for improprieties in a program this large, the financial procedures and fiscal controls exercised by the Environmental Protection Agency (EPA) and grantees in the administration of the construction grant program were reviewed. Findings/Conclusions: Most grantees included in the review were not maintaining required accounting records and, as a result, many requested and obtained improper reimbursements from EPA. Both large and small grantees had this problem. Grantees in some regions have delegated the task of preparing EPA progress payment requests to consulting engineers. Some grantees need to better account for project funds or expenditures and to identify costs which are considered unnecessary, unreasonable, or unallowable for Federal participation. Present grantee procurement practices for obtaining consulting engineer and construction contractor services for the projects do not assure grantees that the lowest practicable fees and prices were obtained. Some of EPA's regional offices were computing progress payments to grantees on costs that included amounts withheld by the grantee from construction contractor billings, a practice contrary to regulations. Recommendations: The Administrator of EPA should: assure that grantees establish and maintain adequate accounting systems for waste treatment projects by providing

written instructions and onsite guidance, provide guidance to grantees which would facilitate preparation of requests for EPA progress payments, advise and emphasize to the grantees their responsibility to review and assure themselves of the accuracy of consulting engineer and contractor billings, and establish standard conditions for contracts so that the method and amount of payment will be consistent. The Administrator should also: place greater emphasis on the use of smaller construction bid packages and separate and combined bidding techniques, determine whether any significant amounts of interest were earned by grantees on Federal funds retained from construction contractors, and reemphasize to regional offices the importance of the progress payment review process. (RRS)

5850



**UNITED STATES  
GENERAL ACCOUNTING OFFICE**

---

**Environmental Protection Agency's  
Construction Grant Program--  
Stronger Financial Controls Needed**

To maintain the fiscal integrity of the multi-billion-dollar waste treatment construction grant program administered by the Environmental Protection Agency, better financial procedures and fiscal controls must be followed so that

- adequate accounting records of project costs by those receiving grants are established and maintained,
- proper and accurate funds are paid under the program, and
- the lowest prices for consulting engineer services and construction contracts are reasonably obtained.



UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

COMMUNITY AND ECONOMIC  
DEVELOPMENT DIVISION

B-166506

The Honorable Douglas M. Costle  
Administrator, Environmental  
Protection Agency

Dear Mr. Costle:

This report discusses financial procedures and fiscal controls that need to be improved to ensure the fiscal integrity of the multibillion-dollar waste treatment construction grant program. The review was conducted as part of the Community and Economic Development Division's long-range work plan addressing the environmental protection issue area, "Management of Federal Contracts, Loans, and Grants for Environmental Protection Programs."

We concluded that grantees' accounting practices and procedures and procurement practices, as well as EPA's progress payment procedures, under the construction grant program could be improved. Recent EPA actions have corrected some of the problems found during our review, and the report contains several recommendations which we believe will further improve the fiscal integrity of the program.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

B-166506

Copies of this report are being sent to the Acting Director, Office of Management and Budget; the Assistant Director for Natural Resources, Congressional Budget Office; the Director, Office of Audit, EPA; and the appropriate congressional committees.

Sincerely yours,

A handwritten signature in cursive script that reads "Henry Eschwege".

Henry Eschwege  
Director

Enclosures - 5

D I G E S T

Vast amounts of funds will be spent under the Environmental Protection Agency's construction grants program--the largest public works effort in the Nation. However, GAO has found that some States, cities, or towns and other local agencies--the grantees--have not had adequate financial management systems to provide efficient and effective accountability and control over funds received from the Agency.

The need for grantees to improve their accounting practices and procedures is apparent. Of the \$19.5 billion authorized for the construction of waste treatment facilities, \$18.1 billion had been obligated and \$6.3 billion spent at September 30, 1977. (See pp. 1 through 3.)

Because grantees generally were not maintaining required accounting records, many requested and obtained improper reimbursements from the Agency. One grantee received over \$364,000 from the Agency and the State for construction items previously ruled ineligible in the grant approval.

The failure to properly maintain required accounting records has caused grantees, in many cases, to rely significantly on their consulting engineers for financial accountability. (See pp. 7 through 11.)

Grantees reviews of consulting engineer and construction contractor billings have not been effectively made. As a result, they have not been able to assure that expenditures under the program have been consistent or proper. (See pp. 13 through 15.)

GAO makes a number of recommendations to assist grantees in establishing and maintaining adequate accounting controls over grants for waste treatment projects. (See pp. 17 and 18.)

In some instances, poor grantee procurement practices resulted in higher fees for consulting engineer services and higher prices for construction contracts. Improving grantees' procurement practices could conserve for the program in future years significant amounts of Federal, State, and local funds. (See pp. 20 and 21.)

Generally, consulting engineer services were obtained by grantees with little or no fee negotiation. This meant grantees could not be sure they had obtained the lowest practicable fees. Smaller grantees, in particular, lacked expertise to negotiate effectively with consulting engineers. In contrast, one State negotiated contracts on behalf of its grantees, reducing total proposed fees by 25 percent-- from \$10.3 to \$7.8 million. (See pp. 22 through 27.)

Construction bid packages used by grantees often limited participation by small construction firms in competing for the work. They did not provide full advantage of a soliciting method that allows bidding on both individual construction segments as well as total project construction.

In contrast, some grantees did prepare bid packages that considered these methods and obtained either lower construction prices or assurance that the lowest practicable prices were obtained. One grantee, by splitting a segment of a project into two parts, realized savings of about \$700,000. (See pp. 27 through 29.)

The Administrator, Environmental Protection Agency, should emphasize the importance of using smaller construction bid packages and separate and combined bidding techniques, as in the construction of interceptor sewers and pumping stations. (See pp. 29 and 30.)

Another problem GAO found is that grantees were not forwarding to contractors all of the amounts they had received from EPA for

construction contractor billings. One grantee received about \$1.25 million from a regional office of the Agency and retained this from the contractor to be sure of his performance. (See pp. 32 through 36.)

GAO found instances where grantees had held sizable amounts of Federal funds for extended periods. Although not legally required, had the grantees invested these funds in interest-bearing accounts, significant amounts of interest could have been returned to the Federal Government. The interest revenue lost by the Federal Government is substantial because of this practice. GAO estimated that in one of the lowest-funded regions, the interest revenue lost for calendar year 1975 on such payments amounted to between \$297,000 and \$455,000.

During GAO's review, the Agency amended its regulations to provide that payments to grantees will only be for those amounts that the grantee promptly pays its contractor. At least one of its regional offices, however, continued to pay grantees for amounts not promptly passed on to contractors even after the regulation became effective. Agency officials plan to followup on this matter. (See pp. 35 and 37.)

GAO also found that the Environmental Protection Agency, through its desk audits before making progress payments, identified many errors or improper items contained in grantee progress payment requests. Other errors and improper claims were not disclosed during the desk audits. (See pp. 37 through 39.)

#### RECOMMENDATIONS

The Administrator, Environmental Protection Agency should determine whether significant amounts of interest were earned by grantees on Federal funds retained from construction contractors and, if so, require that such interest be credited to the Federal Government. Also, until such time that grantees have adequate accounting systems, the Administrator needs to reemphasize to regional desk reviewers the importance of the progress payment

review process and the need for closer scrutiny of payment requests. (See p. 40.)

#### AGENCY COMMENTS

The Environmental Protection Agency generally agreed with GAO's conclusions and recommendations and stated that the Agency has already taken action to correct many of the deficiencies noted during the review. The Agency plans to implement GAO's recommendation regarding the need to improve grantee's financial management systems but feels somewhat constrained because of the Office of Management and Budget's desire to limit requirements that can be placed by Federal grantor agencies on grantees.

Special attention will be given, according to the Agency, to informing grantees, consulting engineers, its personnel, and others of the need for better financial controls to ensure efficient and effective accountability and control over funds received from the Agency. (See pp. 18 and 19, 31, and 40 and 41.)

# C o n t e n t s

		<u>Page</u>
DIGEST		i
CHAPTER		
1	INTRODUCTION	1
	Grant award procedures	2
	Grant payment procedures	4
	Scope of review	5
2	GRANTEES NEED TO IMPROVE ACCOUNTING PRACTICES AND PROCEDURES	6
	Grantees have not established or maintained required accounting records	7
	Grantee preparation of progress payment requests could be less costly	11
	Grantees need to improve reviews and documentation of project costs submitted by consulting engineers	13
	Problems regarding progress payments	15
	Conclusions and recommendations	17
	Agency comments and our evaluation	18
3	GRANTEE PROCUREMENT PRACTICES COULD BE IMPROVED	20
	Procurement of design and engineering services	20
	Procurement of construction services	27
	Conclusions and recommendations	29
	Agency comments and our evaluation	31
4	NEED TO IMPROVE EPA PROGRESS PAYMENT PROCEDURES UNDER THE CONSTRUCTION GRANT PROGRAM	32
	Premature progress payments to grantees should be eliminated	32
	Loss of interest to Federal Government	36
	EPA review of progress payment requests could be improved	37
	Conclusions and recommendations	40
	Agency comments and our evaluation	40

**APPENDIX**

Page

I	State participation in eligible project costs as of October 1977
---	--

42

ABBREVIATIONS

ASCE	American Society of Civil Engineers
EPA	Environmental Protection Agency
GAO	General Accounting Office
HUD	Department of Housing and Urban Development
OMB	Office of Management and Budget

## CHAPTER 1

### INTRODUCTION

The Federal Water Pollution Control Act Amendments of 1956 (Public Law 84-660) (70 Stat. 498) created the waste water treatment construction grant program. The act authorized grants for constructing treatment facilities to prevent untreated or inadequately treated sewage or other waste discharges into waterways. It authorized the grant recipient, or grantee, (State, municipality, or intermunicipal or interstate agency) to receive 30 percent in Federal assistance of the eligible project costs. Subsequent amendments to the act increased the Federal share up to a maximum of 55 percent. The Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) (33 U.S.C. 1251 et seq., Supp. V, 1975) established the Federal share at 75 percent of the eligible project costs and broadened the list of eligible project items.

The 1972 amendments established a national goal of eliminating the discharge of pollutants into navigable waters by 1985 and an interim goal of providing water quality sufficient for the protection of fish, shellfish, wildlife, and recreation by 1983. Publicly owned treatment works were required to achieve secondary treatment 1/ by July 1977 and to use the best practicable treatment technology by July 1983.

For fiscal years 1957 through 1972, the Congress authorized \$6.3 billion for the construction grant program, currently administered by the Environmental Protection Agency (EPA), and appropriated \$5.1 billion. About \$3.6 billion was actually obligated for construction projects and \$1.9 billion expended during this period.

To assist grantees in meeting the requirements of the 1972 amendments, the Congress provided \$18 billion for constructing waste treatment facilities. On October 1, 1976, the Congress increased funding for the program by appropriating \$480 million (Public Law 94-447) to be

---

1/Waste water treatment in which bacteria consume the organic parts of the waste. Effective secondary treatment removes virtually all floating and settleable solids and about 85 percent of the biochemical oxygen demand and suspended solids.

available until expended. An additional \$1 billion was appropriated on May 4, 1977, (Public Law 95-26) to be available for fiscal years 1978 through 1980. As of September 30, 1977, EPA had obligated about \$18.1 billion of the total \$19.5 billion and had expended about \$6.3 billion.

The graph on the following page shows the annual appropriation or contract authority for the construction grant program from fiscal years 1957 through 1977.

In a July 12, 1977, letter to the Speaker of the House of Representatives, EPA proposed that the Congress authorize \$4.5 billion annually for the 9-year period from fiscal years 1978 through 1986 to fund 75 percent of the cost of constructing waste treatment plants, interceptors, combined sewer facilities, and infiltration/inflow corrections. In a February 1977 report to the Congress, EPA estimated that it would cost about \$96 billion to construct these structures to control municipal pollution, exclusive of stormwater runoff.

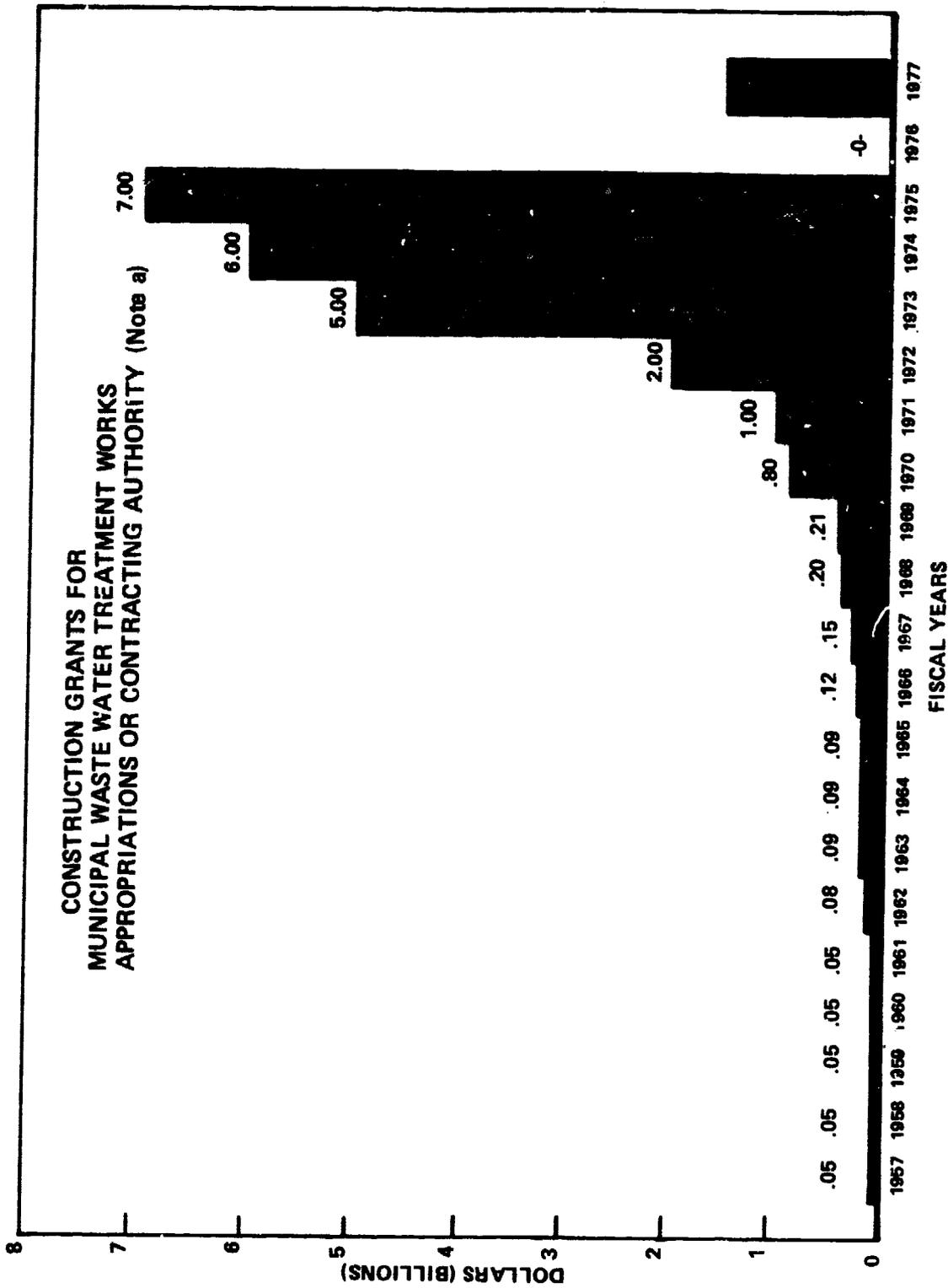
The 25-percent non-Federal share of project costs, plus costs ineligible for Federal participation, are borne by grantees except that the grantees' costs are sometimes reduced in those States that participate in paying part of the project costs. Twenty-nine of the 50 States had sharing programs at October 1977. (See app. I.)

Facilities authorized for construction under the program included treatment plants, interceptor and outfall sewers, pumping stations, power supplies, and other equipment. The 1972 amendments made collector sewer systems, combined storm and sanitary sewers, and recycled water supply facilities eligible for Federal assistance.

#### GRANT AWARD PROCEDURES

EPA's February 1974 regulations, developed pursuant to Public Law 92-500, provide for Federal participation in a treatment facility's costs through three separate grant awards:

- Step 1 grant - preparing facility (preliminary) plans.
- Step 2 grant - preparing design plans and specifications.
- Step 3 grant - constructing the treatment facility.



a/ FUNDS ILLEGALLY IMPOUNDED IN FY 1973-1975 WERE RELEASED FOR USE IN FY 1976 BUT WERE ACTUALLY AUTHORIZED IN PREVIOUS YEARS. THE 1972 AMENDMENTS CHANGED FUNDING METHOD FOR FISCAL YEARS 1973-75 FROM APPROPRIATIONS TO CONTRACT AUTHORITY.

Grantees are responsible for planning, designing, constructing, operating, and maintaining the treatment facilities. Applications for construction grants are approved first by a State's water pollution control agency and then by the cognizant EPA regional office before a grant is awarded. Grantees usually hire engineering firms (consulting engineers) before applying for a grant. Administrative functions connected with grant application and award are transferred to the consulting engineer. In addition, the consulting engineer usually prepares the preliminary plan, design, and specifications; handles the construction bid/award process; monitors construction; and takes care of the progress payment details under the grant.

#### GRANT PAYMENT PROCEDURES

Public Law 92-500 requires that EPA make progress payments to grantees that do not exceed the Federal share of construction costs to date plus materials stockpiled on site. Payments may be made on a monthly basis, but the practice varies among regions because of workload and staffpower differences.

As construction progresses the contractor submits monthly billings, primarily on the basis of an estimate of the percentage of construction completed, to the resident engineer--usually the consulting engineer's representative inspector. Upon approval, the billing then goes to the grantee where it is processed and paid, except that the grantee retains a percentage--usually between 5 and 10 percent--to insure satisfactory completion.

Periodically, the grantee, but usually its consulting engineer, prepares a request for progress payment from EPA which would include the interim billings of the contractor and the consulting engineer's billing under its contract with the grantee. The grantee signs the request and, upon receipt, EPA performs a "desk" review--the depth of which varies considerably among regions. Procedures require payment to be processed by EPA within 20 days of receipt of the request. Final payment under the grant is made after an EIA inspection confirms that the facilities have been satisfactorily constructed. A final audit of project costs occurs at a later date and is made to determine whether any ineligible costs have been paid and that payments have not exceeded the grant award and any subsequent amendments.

## SCOPE OF REVIEW

Because of the magnitude of Federal funds being spent for constructing municipal waste treatment facilities and the potential for improprieties in a program this large, we made a review of the financial procedures and fiscal controls exercised by EPA and grantees in the administration of the construction grant program.

Our review was conducted at EPA regional offices in Boston, Massachusetts (region I); San Francisco, California (region IX); and Kansas City, Missouri (region VII); at the State water pollution control agencies in California, Massachusetts, Missouri, Nevada, New Hampshire, and Iowa; and at selected grantees in these States. Our review included 43 grants awarded under Public Law 92-500 and 8 grants awarded under Public Law 84-660. We reviewed 7 grants in California, 15 in Massachusetts, 10 in Missouri, 1 in Nevada, 8 in New Hampshire, and 10 in Iowa.

We reviewed pertinent legislation, regulations, documents and project files and interviewed officials at the regional offices, State agencies, and selected grantees as well as officials of consulting engineers hired by selected grantees to design their treatment facilities.

## CHAPTER 2

### GRANTEES NEED TO IMPROVE ACCOUNTING

#### PRACTICES AND PROCEDURES

Most grantees included in our review were not maintaining required accounting records and, as a result, many requested and obtained improper reimbursements from EPA. Both large and small grantees were found to have these problems. Although one of three regions had issued detailed instructions on the maintenance of accounting records and another region, as a result of our review, hired an individual to assist grantees, there has been no overall effort by EPA to ensure that grantees are maintaining adequate records. The failure to properly maintain required accounting records has placed grantees, in many cases, in the position of relying significantly on their consulting engineers for financial accountability. This includes the preparation of EPA progress payment requests which generally results in increased cost to the Federal Government because grantee preparation would generally be less expensive.

In addition, grantees have not performed effective reviews of consulting engineer and construction contractor billings and thus have not played a significant role in assuring that expenditures under the program have been proper.

Fiscal integrity in the waste treatment construction grant program is especially critical since almost all of the \$19.5 billion currently authorized will go to either consulting engineers or construction contractors. Although our review did not disclose major improprieties or significant dollar overpayments, it did identify widespread weaknesses present in the construction grant program. Inadequate financial procedures and fiscal controls, if employed by grantees and EPA, provide an opportunity for major improprieties to occur. Under the Federal Water Pollution Control Act Amendments of 1972, EPA's wastewater treatment plant construction grants program has become the largest public works effort in the Nation. In a program of this magnitude adequate financial procedures and fiscal controls are the primary safeguards for Federal funds. As of September 30, 1977, about \$6.3 billion, or 32 percent of the \$19.5 billion had been expended by grantees. Many more billions of dollars will be expended for construction grants in the future and the irregularities will probably continue to increase unless noted program weaknesses are corrected.

Another adverse effect of inadequate recordkeeping is the cost to conduct interim and final audits to determine the fiscal integrity of financial transactions and compliance with grant agreement terms. The poor condition of grantee records will make the cost of such audits unnecessarily high because an excessive amount of time will be required by the auditors to trace and verify the transactions.

Also, procedures for estimating the amount of work completed for computing monthly construction contractors payments differ considerably among resident engineers responsible for approving these payments. As a result, payments to construction contractors were not consistent among resident engineers and varied depending on the degree of documentation resident engineers required a construction contractor to provide to justify work the construction contractor had completed.

#### GRANTEES HAVE NOT ESTABLISHED OR MAINTAINED REQUIRED ACCOUNTING RECORDS

Grantees reviewed in regions I and VII were not provided detailed instructions on recordkeeping procedures and did not, in most cases, establish an accounting system to properly account for project costs as required by EPA regulations. Region IX grantees were provided guidance by EPA to assist them in setting up the necessary system of accounts but we found that, in some cases, grantees were not properly maintaining the accounts. As a result, grantees requested and received improper reimbursements from EPA, and/or were not assured of being reimbursed for all eligible costs.

The Office of Management and Budget (OMB) and the General Services Administration have established government-wide regulations requiring good recordkeeping as being necessary for control of Federal funds. In addition, specific requirements for grant accountability are incorporated in EPA grants by reference to the Code of Federal Regulations which requires for all EPA grants and all subagreements in excess of \$10,000 under grants that

"The grantees shall maintain books, records, documents, and other evidence and accounting procedures and practices, sufficient to reflect properly (1) the amount, receipt, and disposition by the grantee of all assistance received for the project, including both Federal assistance and any matching share or cost sharing, and (2) the total costs of the project, including all direct and indirect costs of whatever nature incurred for the

performance of the project for which the EPA grant has been awarded. \* \* \*

We noted that procedures to ensure the implementation of the above accountability requirements varied among the three EPA regional offices. Region IX, for example, provides grantees with written guidance and exhibits of required financial records. In California, the largest State in region IX, the State agency gives each grantee fiscal instructions which basically incorporate EPA regulations on fiscal accountability and also require the establishment and maintenance of a "construction account." Region I furnishes grantees a July 1969 administrative instruction that requires the establishment and maintenance of a "construction account" by the grantee to which

"\* \* \* all receipts \* \* \* regardless of source, shall be credited and all disbursements shall be charged. This account shall reflect at any time (a) total receipts, (b) total disbursements, (c) balance in the account, and (d) the purpose for which each disbursement was made \* \* \*."

Region VII, however, did not provide its grantees with any implementation instructions. We noted also that technical assistance provided by EPA did not include helping the grantee establish adequate accounting records.

EPA's Office of Audit found similar deficiencies. In a May 3, 1976, audit report, EPA stated that region X (Seattle) had provided inadequate guidance to grantees on necessary financial management and recordkeeping requirements. The auditors concluded that this was the primary reason why, in 21 of 25 grants reviewed, costs totaling \$1.2 million by the grantee were questioned by EPA. Costs were questioned because grantees failed to maintain adequate support, claimed ineligible items for Federal participation, and did not allocate and properly indicate which costs were eligible or ineligible for Federal participation. The auditors recommended that region X inform all grantees of necessary financial management and recordkeeping requirements and distribute clarifying instructions for preparation of claims for costs.

Our review showed that most grantees in regions I and VII were not establishing and maintaining adequate fiscal accounts. For example, 22 of 34 grantees in regions I and VII had not established the required construction accounts. Most grantees in region I stated they were not aware of the

EPA "construction account" instruction. Rather, they relied on their consulting engineer to keep necessary accounting records. The remaining 12 grantees had established a construction account but generally failed to segregate costs by type and eligibility or were not properly maintaining them. Many lacked proper supporting documentation. Seven of the eight grantees in California and Nevada established the basic account structure provided for in the State and EPA instructions but four did not properly maintain the accounts.

Grantee records in most cases did not permit identification of financial data needed for grant purposes without detailed examination. For example, Roseville, California, had a grant condition in its contract for an environmental impact assessment report and other special studies that the fee could not exceed \$5,000. The grantee, however, exceeded the \$5,000 maximum fee and improperly paid \$20,000 under this contract over the period August 1972 to July 1973 without an amendment. Both EPA and the State shared in the reimbursement of this amount. A comparison of periodic payments against the contract terms would have caused the grantee to question the excess payments, and, if warranted, amend the contract.

Salem, New Hampshire, received a \$158,000 grant for additions to its treatment facilities in January 1974. The grantee commingled proceeds from all its water and sewer projects in one appropriation account. At year end the appropriation account was reduced by a single entry for all expenditures from a handwritten worksheet maintained for all projects. Invoices were paid without reference to related agreements and contracts, and grantee officials were not aware of the amounts expended or available for any one project, stating they depended on their engineering firm to keep necessary accounting records. A review of invoices paid by the grantee revealed that a contract ceiling of \$8,000 for engineering design had been overpaid by \$3,000 during 1974. We also noted that the same official recorded all receipts and disbursements, made deposits and wrote checks, and reconciled the checking account--contrary to good internal control procedures.

Gilbertville, Iowa, received a \$262,120 grant to construct waste treatment facilities in April 1974. The grantee did not set up accounting records necessary for proper accountability of project costs. Records were maintained on a cash basis in a receipts and warrants register, and costs were not segregated as to eligibility or

category of expense. In addition, an \$82,000 receipt from the Farmers Home Administration was recorded as a receipt from EPA, and two receipts from EPA totaling \$98,720 were not recorded. Furthermore, the same person maintained the records, wrote checks, and also deposited receipts--a basic internal control weakness.

Fresno, California, in August 1974, received a \$19,501,930 grant to upgrade and expand its treatment facilities. Its accounting system for handling grant costs was set up according to State guidelines except that costs were not segregated as to eligible and ineligible. As a result, both EPA and the State participated in over \$364,000 of construction items previously ruled ineligible in the approval of the grant. The grantee later adjusted payments for these costs; however, ineligible engineering costs approximating \$127,000 were still not excluded from reimbursement at the time of our review. In addition, the grantee requested that EPA reimburse it for construction costs it had retained from payments to contractors not realizing that the earlier EPA payments included participation in the retained amounts.

EPA's Office of Audit has also found similar deficiencies. A December 17, 1976, audit report noted that the accounting system of a large midwest municipality was inadequate because it did not differentiate between costs eligible and ineligible for Federal reimbursement, its records were not up-to-date, and it did not reflect all costs incurred. Because costs were not differentiated between eligible and ineligible, the grantee overstated eligible costs on payment requests to EPA and the grant was overpaid by \$227,586 or 22 percent of the Federal share claimed. The audit report noted that, unless the deficiencies were corrected, the construction contract would be overpaid by \$400,000.

A January 12, 1977, EPA audit report noted that the accounting system of a sanitary district was deficient and did not properly record, accumulate, and classify all project costs and credits. Because of these deficiencies, the EPA auditors questioned grantee claims of \$312,000 (Federal share) or 44 percent of costs claimed. The auditors recommended that the questioned amount be disallowed and that before the award of additional grants, the district implement an adequate accounting system.

During our review we noted that technical assistance provided by EPA did not include helping the grantee establish adequate accounting records. It appeared to us, however,

that grantees were generally receptive to the idea of having EPA assist them in establishing the necessary accounting system and explaining how it should be maintained. The accounting requirements are unsophisticated and once explained need not require more than a clerical person to maintain the accounting system. As a result of our findings and discussions with officials in region VII, the region hired an employee with an accounting background for the purpose of assisting grantees in establishing proper accounting records for project receipts and expenditures. In addition, an EPA official informed us that EPA plans to distribute to grantees an "Accounting Standards for Construction Grants," dated October 1977. This document offers suggestions to grantees for financial management of their construction grant projects and points out to grantees that, as recipients of Federal grants, they are responsible for the fiscal integrity of construction grant projects. Approximately 5,000 of these documents will be distributed to various grantees by EPA's regional financial management officers. We believe that such action is necessary in situations where the grantee needs help to establish and maintain adequate accounting records.

Poor recordkeeping by grantees not only resulted in improper payments, it also made our audit very difficult and will make EPA audits unnecessarily expensive due primarily to the necessity of expending a great deal of time identifying and accumulating costs and expenditures applicable to a project. Grantee records, as maintained, did not generally reflect the true nature and extent of project costs and expenditures. In our reviews of grantee accountability for project costs, for example, we were repeatedly required to do a great deal of clerical type work accumulating cost and expenditure data to provide a reasonable basis for transaction analysis and testing.

#### GRANTEE PREPARATION OF PROGRESS PAYMENT REQUESTS COULD BE LESS COSTLY

In two of the three regions included in our review, grantees generally delegated the preparation of requests for EPA progress payments to their consulting engineers. This may result in increased costs to the Federal Government. Proper accountability and control of project costs by grantees would allow them without difficulty to prepare their own payment requests which would generally be less expensive.

In region I consulting engineers were preparing grantee requests for progress payments in all 15 Public Law 92-500

projects we reviewed; whereas, in region IX all eight grantees were preparing their own progress payment requests. In region VII the consulting engineers prepared the requests in nine cases for the grantees, and in six cases the grantee prepared his own request. Information on four grantees in region VII was not obtained. The table below details the information by region and State.

<u>EPA region/State</u>	<u>Grantees</u>	<u>Progress payments prepared by</u>	
		<u>Consulting engineer</u>	<u>Grantee</u>
Region I:			
Massachusetts	7	7	-
New Hampshire	<u>8</u>	<u>8</u>	<u>-</u>
Total	<u>15</u>	<u>15</u>	<u>-</u>
Region VII:			
Iowa	7	5	2
Missouri	<u>8</u>	<u>4</u>	<u>4</u>
Total	<u>15</u>	<u>9</u>	<u>6</u>
Region IX:			
California	7	-	7
Nevada	<u>1</u>	<u>-</u>	<u>1</u>
Total	<u>8</u>	<u>-</u>	<u>8</u>
Total	<u>38</u>	<u>24</u>	<u>14</u>

The costs for preparing grantee requests for payment, while not separately identified on consulting engineer invoices, are included in the grantee's payments. Because progress payments may be requested from EPA as often as monthly, grantees could reduce the Federal share of waste treatment cost by performing this function. For example, the costs of preparing grantee requests for payment over the construction period were estimated by selected consulting engineers as follows:

--Cheshire, New Hampshire: \$1,200 (\$300 each for an expected four requests).

--Manchester, New Hampshire: \$2,500 (between \$400 and \$600 each for an expected five requests).

--Haverhill, Massachusetts: \$2,000 (between \$230 and \$575 each for an expected five requests).

While individual amounts may be small, the potential for ultimate savings becomes more significant in view of 2,838 active construction projects in the program--involving \$12.9 billion--as of August 1977 and thousands of additional projects contemplated to be funded in future years.

As noted previously, establishing and maintaining a construction account would not be difficult for grantees. Once established, grantees would have sufficient control of project receipts and expenditures to enable them without difficulty to prepare requests for EPA progress payments, thereby reducing the cost of consulting engineer services.

In region IX, for example, grantees prepared their own requests for progress payments. The guidance provided them by the State and/or EPA concerning the establishment and maintenance of proper accounts and progress payment preparation permitted them, we believe, to do so. Similar guidance by EPA or States would, in our opinion, allow other grantees to develop the same capability. Doing so would increase the involvement of grantees in controlling and accounting for their project costs--a desirable change from nearly complete reliance on consulting engineers for financial accountability.

GRANTEES NEED TO IMPROVE REVIEWS AND  
DOCUMENTATION OF PROJECT COSTS SUBMITTED  
BY CONSULTING ENGINEERS

Determining the validity of costs included in requests for EPA progress and final payments is a grantee responsibility. Our review showed that grantees were generally relying on their consulting engineers' integrity and reputation--with limited review and documentation--in accepting consulting engineers' billings and certifications of construction contractor performance. Eleven of 15 grantees in region I, for example, merely rubber-stamped approval of billings for payment--relying on their consulting engineers. As a result, grantees made erroneous and questionable payments to consulting engineers and contractors which, in

some cases, were reimbursed by EPA as illustrated in the following examples.

Springfield, Missouri's, consulting engineer was paid \$2,089 in December 1974 for use of equipment in field surveys which was not provided for in the contract. The amount was included in a progress payment request in which EPA erroneously participated. Because the contract fee was to cover only services needed in performance of the contract, we brought the matter to the attention of the grantee, who was unaware of what the billing was for. Adequate review of the billing would have permitted the grantee to question the equipment charge before payment.

In Springfield, Massachusetts, the consulting engineer billed the grantee for \$102,314 on the basis of invoices for special services over a 3-year period from June 1970 to February 1974. While the invoices identified individuals, hours worked, and hourly rates, they did not specify what special services were performed. The grantee paid these invoices without question and submitted the amount for EPA participation. EPA, however, allowed only \$35,740 for grant participation; it excluded \$30,696 as ineligible. For the remaining \$35,878, EPA requested a breakdown to determine its eligibility. Had the grantee initially obtained documentation adequate to ascertain cost eligibility, it could have made the same determination before submission to EPA.

Clinton, Iowa's, design contract for resident engineering services provided that

"\* \* \* the Owner shall pay to the Engineer for such service salary cost plus eighty-five percent (85%) to cover and include travel expenses, payroll taxes, sick time, compensation insurance, hospitalization and life insurance premiums, pension costs, and other overhead expenses."

The consulting engineer, however, billed the grantee for salary costs times a 1.25 factor before applying the 0.85 salary multiplier. The consulting engineer stated the intent was that the salary cost multiplier of 1.25 would be applied to actual wages to cover the fringe benefits burden, and the 0.85 multiplier was to cover overhead, profit, contingencies and readiness to serve. EPA regional grant administration officials stated that they allowed the billing procedure for Federal participation because many such contracts were written this way and previous billings had not been questioned. The Chief Attorney in EPA regional

enforcement division stated, however, the 1.25 factor was ineligible because it was not stated in the contract and that if it had been the intent of both parties to include the 1.25 factor, the contract should have been amended.

In addition to reviewing billings to grantees by consulting engineers, grantees also need to check the accuracy and validity of construction contractor requests for progress payments which are reviewed and approved by the resident engineers--normally an employee of the consulting engineer.

Haverhill, Massachusetts, for example, paid a construction contractor's invoice in July 1974 which was overstated by \$12,700. The grantee did not review the invoice but rather relied on the acceptance and approval of the resident engineer. The effect of the overstatement was an advance payment to the contractor because the contract ceiling was not exceeded.

#### PROBLEMS REGARDING PROGRESS PAYMENTS

We found that because different procedures were being used by resident engineers to determine progress payments to construction contractors, different payments were being made for similar types of completed work. As a result, more liberal progress payments were being made to some contractors than to others. For the grants we reviewed, procedures differed considerably in estimating the cost of work-in-place and materials and equipment stored at construction sites for purposes of monthly progress payments to the contractor. Premature progress payments (advance payments) increase the cost not only to the grantee but also to the Federal Government because funds are expended earlier than would otherwise have been the case. Advance payments, according to some resident engineers, however, are an accepted practice in the construction industry and are considered acceptable as long as they are within reasonable limits.

In Fall River, Massachusetts, for example, the resident engineer approved a monthly estimate of work-in-place which gave the contractor an advance payment of \$8,250. The construction contract included concrete work but this was broken down into four subitems with different cubic yard prices for each subitem. In the month concerned, the contractor poured 150 cubic yards of the concrete priced at \$60 per unit. However, instead of receiving \$9,000 (150 cubic yards by \$60) for this work,

he requested and received payment at the average unit price for all concrete of \$115--a total of \$17,250. The resident engineer stated he was aware of the error but approved the monthly cost of work-in-place at the average unit price of \$115 simply to maintain good working relations with the contractor.

We do not agree that providing advance payments should be an acceptable practice in the EPA progress payment computations. Where a resident engineer permits such practices, he is not meeting his responsibility to his client--the grantee--while causing premature cash disbursements by grantees and EPA.

Differences in resident engineers' procedures for approving stockpiled materials in the vicinity of the construction site for progress payment purposes allow some contractors to benefit more than others. For example, the resident engineer at Middleboro, Massachusetts, required proof of payment by the contractor before approval for progress payment. Haverhill, Massachusetts, and Manchester, New Hampshire, resident engineers approved payment immediately, but required proof of payment to the vendor within 30 to 60 days. Erving and Rockport, Massachusetts, resident engineers did not require proof of payment at all. As a result, contractors could prematurely obtain progress payments from grantees for materials before paying their suppliers; whereas, those contractors required to show proof of payment had to expend their funds before obtaining grantee progress payments for materials. We believe that the submission of proof of payment to the consulting engineers would provide greater assurance of successful contractor performance.

Differences also existed among resident engineer procedures for approving types of stored materials allowed for progress payment purposes. In Wolfeboro, New Hampshire, the resident engineer did not permit the contractor to include items like reinforced steel, fittings, and other consumable materials but would allow major equipment items. The resident engineer at Springfield, Massachusetts, however, allowed inclusion of equipment items as well as consumable materials such as finish hardware, joints, and shop shelving. In contrast, a resident engineer in Kerman, California, does not approve payments for any stored materials--only work-in-place.

We found also that in 13 of 25 construction projects we reviewed, resident engineers were providing little or no verification of materials stored at the site which were nevertheless approved for progress payment purposes. In Springfield, Massachusetts, we made a selective inventory test

of stored material items invoiced at \$90,000 and approved by the resident engineer for progress payment. The invoice contained no detailed description, nomenclature, or quantities of the materials and could not be confirmed because the resident engineer had no idea of their location.

### CONCLUSIONS AND RECOMMENDATIONS

Maintaining the fiscal integrity of the multibillion-dollar waste treatment construction grant program is crucial. Adequate financial controls and accounting procedures must be utilized to reduce the opportunity for major improprieties and irregularities.

Grantees are required by various Federal regulations and circulars and EPA regulators, guidance memoranda, and instructions to establish and maintain adequate records to properly account for project receipts and expenditures. Grantees also have the responsibility to review proposed payments to consulting engineers and construction firms for propriety and accuracy and to obtain documentation sufficient to support the expenditures. However, grantees in regions I and VII have not met these responsibilities. Some grantees in region IX had initially established the necessary accounts but had not properly maintained them. In addition, grantees in regions I and VII have, for the most part, delegated the task of preparing EPA progress payment requests to their consulting engineers. This delegation was probably necessary at the time of our review because of the failure of grantees to establish and maintain accounts that would permit them without difficulty to prepare the requests as grantees do in region IX. Reduced participation by grantees in fiscal management weakens the internal control required in a program of the magnitude of EPA's construction grant program. Greater participation by grantees would enable them to assume some of the duties presently performed by consulting engineers. Some grantees need to better account for project funds or expenditures and to identify costs which are considered unnecessary, unreasonable, or unallowable for Federal participation. In addition, the absence of such accountability at the grantee level will necessitate an unnecessarily large expenditure of time by EPA personnel in interim and final audits to collect historical data on project receipts and expenditures.

We recommend, therefore, that the Administrator, EPA

--assure that grantees establish and maintain adequate accounting systems for waste treatment projects by providing written instructions and onsite

assistance to grantees that do not have the capability;

- provide guidance to grantees which would facilitate their preparing requests for EPA progress payments;
- advise and emphasize to the grantees, at the preaward and preconstruction conferences, their responsibility to review and assure themselves of the accuracy of consulting engineer and construction contractor billings before requesting progress payments from EPA; and
- establish standard conditions for contracts so that the method and amount of payment regarding stored materials will be consistent among resident engineers.

#### AGENCY COMMENTS AND OUR EVALUATION

EPA officials generally concurred with our conclusions and recommendations regarding inadequate grantee accounting and financial controls over project costs and expenditures. According to EPA, it recognized that it may not have been very explicit in explaining to grantees in the past about how accounts should be maintained or how accounting information should be developed and maintained. To correct this problem, EPA officials stated that they sent informal guidelines on accounting standards for construction grant projects to the ten regional administrators in September 1976. Although these guidelines were to have served as guidance for grantee accounting systems, EPA officials were not aware of what the regional administrators had done with the guidelines. On the basis of our recommendations, EPA officials also informed us that they had printed approximately 5,000 "Accounting Standards for Construction Grants" in October 1977 which will be sent to grantees to provide sufficient guidance for grantees to know what EPA expects in the way of minimum accounting controls and records. We believe this document will be very helpful to grantees in showing them how to establish the necessary controls and procedures in their accounting and financial management systems.

EPA officials agreed that the methods of making payments and the amounts of payments for stored materials have not been consistent among resident engineers. Because resident engineers vary in the way they authorize payments for stored materials, EPA officials agreed that the best approach to take for eliminating such an inconsistency would be to

standardize the procedure by placing a standard condition in every contract.

EPA also stated that many grantees do not realize that, as a recipient of a Federal grant, they are responsible for the fiscal integrity of the grant and that they cannot delegate this responsibility to a contractor or consulting engineer. EPA commented that the preaward and preconstruction conferences would be the best time to emphasize this responsibility to grantees. EPA could also emphasize the importance of maintaining good accounting records, establishing a sound financial management system which would enable grantees to prepare their own progress payments, and reviewing consulting engineer and construction contractor billings for accuracy. We agree with EPA that these conferences would be very helpful in providing guidance to grantees on these matters and informing them of their responsibility for the fiscal integrity of their grants. We also believe that greater awareness and understanding by grantees will result in improved internal controls, fewer improper payments, lower administrative costs for preparing progress payment requests, and generally greater consistency and efficiency in the fiscal practices and procedures used by grantees.

## CHAPTER 3

### GRANTEE PROCUREMENT PRACTICES COULD BE IMPROVED

EPA grant funds for design and construction of waste treatment facilities have been greater than necessary in some instances, because of poor grantee procurement practices which have resulted in higher fees for consulting engineer services and higher prices for construction services. Grantee practices, in addition, did not provide assurance that lower prices could not have been realized. With billions of dollars planned for expenditure in future years, improving grantees' procurement practices could conserve significant amounts of Federal, State, and local funds.

Grantees in most States were contracting for consulting engineer services with little or no fee negotiation. As a result, grantees had no assurance they had obtained the lowest practicable fees. Smaller grantees in particular lacked the expertise needed to negotiate effectively with consulting engineers. In contrast, one State did negotiate contracts on behalf of its grantees reducing total proposed fees of \$10.3 million to \$7.8 million--including changes in proposed work scope--a reduction of about 25 percent.

Bids for construction services solicited by grantees often (1) limited participation of small construction firms in competing for the work and (2) did not take full advantage of a soliciting method that allows bidding on both individual construction segments as well as total project construction. In contrast, some grantees did solicit bids effectively, and as a result, obtained either lower construction prices or assurance that the lowest practicable prices were obtained for construction projects.

#### PROCUREMENT OF DESIGN AND ENGINEERING SERVICES

Our review of grantee procurement practices in contracting for consulting engineer services showed that grantees generally accepted--without negotiations--fees proposed by consulting engineers for design services which were based on American Society of Civil Engineers (ASCE) fee curves or percentage-of-construction-cost fee method. Grantees--especially smaller communities--lacked the expertise or technical skills to negotiate effectively with consulting engineers. On the basis of the savings realized by one State that negotiated on behalf of its grantees, we believe that EPA grant amounts for consulting engineer services can

be appreciably reduced by more effective grantee procurement practices.

Prices established without effective negotiations

ASCE, in its 1975 manual entitled "Consulting Engineering," states:

"In the development of any engineering project, no decision is more important to the Client than the selection of the Consulting Engineer. Upon the experience, skill, integrity, and judgement of the Engineer rests the cost, suitability, and structural soundness of the proposed work for its intended function."

\* \* \* \* \*

"No two engineering firms have equal training, experience, skills, capabilities, personnel, workloads, and particular abilities. Selection of the firm for a specific cost can mean the difference between a well-planned, low-cost, successful project, or a mediocre and costly one."

Fees for design and engineering services for most of the Public Law 92-500 grants reviewed were based on the engineering profession's practice of using a fee curve, which specifies a range of fee percentages based on the construction cost of the designed facilities. The fee curve is published in the ASCE Manuals and Reports on Engineering Practice-No. 45 and is a guide in determining an engineer's fee. According to the manual, the use of the fee curve is intended as a basis for initiating discussions with a client and the final fee should be determined by negotiations, including discussion of scope of work and engineering cost elements. Grantees, however, generally accepted proposed fees without attempting to negotiate them downward.

Our review of the extent of grantee fee negotiations showed that in 35 cases where we obtained pertinent information, 23, or 66 percent, of the grantees made no attempt to negotiate fees. For example, in December 1974 Middleboro, Massachusetts, accepted, without negotiation, a proposed lump sum price of \$197,000 for design and construction administration services for expanding and upgrading its treatment facilities. A Middleboro official said the city did not attempt to negotiate the proposed price because

it had been doing business with the consulting engineer and believed it could rely on his integrity for reasonableness of the fee.

In April 1972 St. Louis, Missouri, accepted a proposed fee of \$3.3 million without negotiation because the fee was based on a percentage of estimated construction costs of \$58 million in accordance with ASCE guidelines.

While our review did not include an evaluation of the reasonableness of fees paid by individual grantees for consulting engineer services, a December 1974 draft report by EPA's Office of Audit on the tentative results of the initial 41 interim construction grant audits showed that many of the fees were based on the ASCE fee curve. The report concluded that profit percentages were higher than warranted--ranging from 26 to 268 percent of costs. The study reported:

"For these engineering firms our audits disclosed costs incurred of approximately \$10,389,334 on EPA grant projects while the related engineering fees were \$15,952,147. The difference of \$5,562,813 represents profit. We consider this level of profit to be excessive."

#### Grantees lack expertise to negotiate fees

Most small grantees included in our review lacked the expertise or ability needed to effectively negotiate fees for design and engineering services. Information obtained from 24 grantees showed that 18, or 75 percent, did not have employees or officials with adequate qualifications or expertise to effectively negotiate contracts with their consulting engineers for design of treatment facilities. Larger grantees usually had engineering staff with the capability to negotiate but were not doing so in most cases.

Fourteen of the 15 grantees contacted in region I stated they lacked the expertise to negotiate fees. In Erving, Massachusetts, a municipality of less than 2,500 persons, all of its employees were employed on a part-time basis. Neither the employees nor the city selectmen were familiar with the design or construction of a treatment plant, and city officials informed us that they did not have the expertise to effectively negotiate their design contract. The consulting engineer split the project into two separate grants, and the grantee accepted proposed fees of \$94,000 and \$237,000 for design services without negotiation.

Another illustration of grantee lack of expertise to negotiate a consulting engineer contract and the effect on proposed fees is Kerman, California, where a proposed fee of \$124,000 for design of its treatment plant was accepted without negotiation. The consulting engineer applied ASCE guideline percentages to separate units of construction as follows.

	<u>Construction cost</u>	<u>ASCE percentage</u>	<u>Design fee</u>
Treatment plant	\$1,369,000	7.3	\$ 99,937
Interceptor (note a)	112,962	11.4	12,878
Collector (note a)	<u>100,533</u>	11.6	<u>11,662</u>
Total	<u>\$1,582,495</u>		<u>\$124,477</u>

a/Both units are included in one construction contract.

The ASCE manual provides, however, that for purposes of computing fees, construction cost is defined as the total cost to the client for execution of work authorized at one time. Had all construction items been combined in arriving at the fee percentage, the total fee would have been reduced about \$7,000 because of the declining ASCE percentages for larger construction costs. The grantee's unfamiliarity with the ASCE guidelines and reliance on the consulting engineer resulted in a higher fee than warranted.

New Hampshire, with many small grantees, recognized its grantees' lack of expertise in negotiating consulting engineer fees. Since April 1970 New Hampshire has been a cosigner to its grantees' consulting engineer contracts and has conducted negotiations involving proposed fees and work scope for over 200 grantees through February 1975. These negotiations reduced proposed fees of \$10.3 million by \$2.5 million, or about 25 percent. The State took this action because it recognized that consulting engineers were not designing cost-effective facilities and that grantee municipalities were generally not capable of conducting effective negotiations. A State agency official believed that because of the State's system, consulting engineer fees are lower in New Hampshire when compared to similar fees in other States.

New Hampshire's approach to negotiations with the consulting engineers selected by its grantees began with the preparation of fee estimates on the basis of using three separate estimating methods to arrive at an average.

- Curve method: Use of the ASCE fee curves and State agency experienced cost curve.
- Sheet method: Estimating the type and quantity of sheets of plans on the basis of actual counts of past projects, and applying a cost per sheet on the basis of cost of past projects.
- Crew method: Estimating the staff-days of effort by category of personnel required to complete the project multiplied by average salary rates and then by a factor of 2.5 for overhead and profit.

When a consulting engineer's proposed fee at the beginning of negotiations is lower than the average fee arrived at by the State, it will be accepted subject to a review of work scope. When higher, the parties negotiate the fee or price on a detailed basis. If the negotiations do not result in agreement, the State requests the grantee to select another consulting engineer.

All eight New Hampshire grants included in our review had fees negotiated by the State. For example, negotiations held with Bedford's consulting engineer reduced the proposed fee from \$204,000 to \$163,000, a reduction of \$41,000, or about 20 percent, without a reduction of work scope. Wolfeboro, New Hampshire's, consulting engineer could not reach a fee agreement with the State. The grantee offered to pay the difference out of its funds to retain the consulting engineer. The State agency refused, citing statutory prohibitions as cosigner to the agreement and directed that the grantee select another consulting engineer.

#### Recent EPA actions

On December 17, 1975, EPA amended its construction grant regulations concerning formal advertising, negotiation, and grantee expertise in the procurement of design and engineering services, with the pertinent sections becoming effective on March 1, 1976. See 40 C.F.R. 936 and 937 (1976). The amendments set forth major changes in EPA's requirements for grantee procurements of design services which are briefly described below.

#### Competition

The regulations set forth requirements for competition including public notice, evaluation of qualifications of

firms that respond to the public announcement, and solicitation and evaluation of professional service proposals.

Adequate public notice is usually required for consulting engineer services with an anticipated price of more than \$25,000. Public notice includes announcement in professional journals and newspapers to request submission of qualifications of interested firms. An alternative could be the use of a prequalified list developed through use of the public notice procedure.

Grantees shall uniformly evaluate the submitted firms' qualifications using an objective process such as a committee or board which includes to the extent practicable persons with necessary technical skills. The criteria used should include specialized experience, past performance, capacity to perform, familiarity of firm with expected project problems, and the avoidance of personal and organizational conflicts of interest prohibited by law or regulation.

Requests for professional services proposals must be sent to at least three responding firms, unless fewer respond to the public notice in which case all qualified candidates must be provided requests for proposals, and must be uniformly evaluated by a committee or board of persons with necessary technical skills.

The preceding public notice requirements for fostering competition are not required but may be followed by grantee municipalities of 25,000 or less population. As of December 31, 1976, these municipalities accounted for 81 percent of all construction grants and 30 percent of funds awarded. In addition, where a grantee is satisfied with the performance of a consulting engineer on all or part of either step 1 or 2 grants, the same firm may be retained if it has the capacity to perform the subsequent steps for future step 2 or 3 work without adhering to the above requirements. Also, where a single treatment facility is segmented into two or more step 3 projects and the design work is likewise segmented, the grantee may use the firm which designed the initial segment to design subsequent segments under the same grant.

## Negotiations and expertise

The regulations provide that--for contracts above \$10,000--negotiations with the selected engineer may be conducted pursuant to Public Law 92-582, commonly referred to as the "Brooks Bill" and incorporated into Federal Procurement Regulations with the objective of reaching agreement on contract provisions. However, if State or local procedures call for more competition, that process may be followed. Scope of work, identification of personnel and facilities, and a fair and reasonable price are of major concern. Negotiation of prices for subagreements awarded to an engineer expected to exceed \$100,000 for work on one step will include submission of cost and pricing data to be reviewed by the grantee to ascertain both the necessity and reasonableness and the allowability and eligibility of proposed costs. The grantee is required to submit this and other pertinent data to EPA for review before contract award. For prices between \$10,000 and \$100,000, cost data may be submitted in summary form accompanied by the engineer's certification as to completeness and accuracy, with estimated profit set out as a separate item. Determining a fair and reasonable profit should be based on the consulting engineer's assumption of risk and input--not merely on a predetermined percentage factor. Cost-plus-percentage-of-cost and percentage-of-construction-cost types of contracts are prohibited.

The regulations recognize that grantees may not always have procurement and negotiating expertise and provide that such services may be performed by the grantee indirectly by another non-Federal governmental body, person, or firm retained for the purpose. In December 1975 New Hampshire applied for EPA approval of its procedures for procuring consulting engineer services under the construction grant program. EPA approved the State's procedures on March 11, 1976.

Although the regulations require a grantee or his designee to negotiate a fair and reasonable profit with the selected engineer on contracts above \$10,000, little guidance or criteria is provided to assist inexperienced grantees during the negotiations. In this regard, EPA had proposed establishing, in September 1976, profit ranges which would assist in determining a fair and reasonable profit for consulting engineer contracts. EPA considered this action because of indications from regional personnel and consulting engineering organizations that there may be a need for further guidance with respect to profit levels and contract pricing--some standard to measure against for support in the negotiation process. EPA proposed establishing certain profit ranges for normal jobs as well as criteria which

should be utilized to evaluate profit when it appears to be outside of the normal range.

A decision not to issue formal contract profit ranges was made by EPA in January 1977 after discussion and comment by affected parties. EPA stated that there had been enough variation from the proposed profit ranges to argue against their formal issuance.

EPA stated that it would continue to explore various options for the possible future issuance of profit guidelines.

### PROCUREMENT OF CONSTRUCTION SERVICES

Our review showed that an opportunity exists for lowering construction costs by improving grantees' procurement procedures for preparing and processing construction bid packages.

Consulting engineers usually prepared construction bid packages for grantees. We noted projects where it appeared practicable to break down bid packages into smaller segments. This would increase competition for work by permitting small firms to compete, which could result in lower project costs. Also, the technique of both separate and combined bidding; i.e., obtaining bid-prices on individual construction segments (separate) and a bid price for the total construction package (combined), did not appear to be used consistently to provide greater assurance of lowest prices.

#### Changes in bid package preparation could lower construction costs

Most grantees were not assured of obtaining the lowest practicable bids for their total project facilities because construction bid packages were not divided into as small segments as practicable and did not provide for both combined and separate bidding in the bidding instructions.

#### Dividing bid packages into smaller segments

Because of the size of the construction projects, many smaller contractors capable of bidding on smaller work segments are precluded from submitting bids. Projects usually encompassed a treatment plant, interceptor sewers, and, if necessary, pumping stations. Treatment plants were usually bid separately from other project segments, such as interceptor and pumping stations. While it may not always be practicable or desirable to divide the treatment plant into

separate bid segments, it usually is practicable to separate the interceptor sewers from the pumping stations as individual bid items and also to divide the longer sewer lines into segments.

According to engineering officials of a large grantee, a consulting engineer, and a State water pollution agency, greater competition can be obtained in bidding by dividing the construction into as small bid segments as practicable to allow more small contractors to compete for the work.

We believe that in 8 of 22 construction projects reviewed there was potential for dividing the construction into smaller segments than was done.

Springfield, Massachusetts, for example, divided its \$60 million project into eight segments on the basis that better prices would be obtained by permitting smaller contractors to compete. The segments were still quite large, however, and were susceptible to further division. For example, when the low bid of \$4.8 million for one segment of interceptor sewer was rejected in June 1973 because of questionable contractor experience, the grantee, in order to permit more contractors to compete, split the same segment into two parts and readvertised.

Awards made in January 1974 to the two low bidders totaled about \$700,000 less than the original single low bid. By splitting the segment, this grantee was able to accommodate more contractors and reduce construction costs further.

Wolfeboro, New Hampshire, however, provided for bidding on a total project basis only in awarding a \$1.4 million contract for constructing its treatment plant, modifying a pumping station, and constructing a force main and a sewer syphon across a river. Haverhill, Massachusetts, awarded a \$15 million contract in August 1974 that did not provide for separate bidding on a treatment plant and pumping station; thus, a single contract was awarded on the basis of total price for both items.

There may be problems, however, in dividing projects into smaller segments in that the consulting engineer will need to supervise a greater number of contractors. According to one consulting engineer, construction management is simplified by having to deal with as few contractors as possible. When several contractors are involved, supervision and control of construction by the resident engineer is made more difficult.

Although construction management may be more difficult, we believe the opportunities for significant reductions in

construction costs would more than offset additional management costs due to increased management complexity.

### Using both separate and combined bidding

Providing for both separate and combined bidding for various project segments affords the grantee the opportunity to compare the costs of project construction on the basis of several alternatives. In this way, the grantee may choose the combination of bids that provides for the lowest construction cost. With only one type of bidding, the grantee does not know whether a lower price could have been obtained.

Of the 22 projects we reviewed, only one grantee provided for both separate and combined bidding on a total project basis. In two other cases, both combined and separate bidding was allowed on at least one segment of the total project. Of the remaining 19, 7 allowed one combined bid for the entire project and 12 required separate bids for various segments.

The value of this bidding method was demonstrated by Tahoe-Douglas, Nevada, for example, which received a \$2.4 million grant for construction of pumping stations and an interceptor sewer. A bid package was prepared which provided for both separate and combined bidding--either one or two contracts. The grantee awarded two contracts resulting in savings of about \$200,000 compared to the lowest combined bid.

To assure the lowest construction cost, a grantee in New Hampshire also instructed its consulting engineer to provide for separate and combined bidding for two construction contracts. Because of this action two separate contracts were awarded which resulted in savings of \$22,000 over the lowest combined bid. However, Wolfeboro, New Hampshire, and Haverhill, Massachusetts, as mentioned earlier did not know if they received the lowest construction price because separate and combined bidding was not used.

### CONCLUSIONS AND RECOMMENDATIONS

Present grantee procurement practices for obtaining consulting engineer and construction contractor services for the projects included in our review did not assure grantees that the lowest practicable fees and prices were being obtained. Grantees generally accepted fee proposals from consulting engineers that had done previous work for them without negotiating those fee proposals. One reason for the lack of negotiation was the willingness of grantees to accept the

ASCE fee curve guidelines on the basis of percentage-of-construction-costs. Another reason for the lack of negotiation, especially among small grantees, was the grantee's lack of technical expertise to negotiate with consulting engineers.

Grantees have relied on consulting engineers to prepare construction bid packages and these firms do not appear to be breaking bid packages into segments as small as possible to permit competition among smaller construction firms. In addition, the bid packages did not use both separate and combined bidding alternatives to assure the grantees that the lowest total prices were obtained.

Recent EPA regulations for soliciting and evaluating consulting-engineer qualifications and negotiating fair and reasonable prices have improved the procurement procedures used by grantees; however, problems still exist. While price negotiations are required for all consulting engineer services over \$10,000, there is little criteria for determining the amount of a fair and reasonable profit. Consulting engineers must submit cost data and identify profit for price negotiations, but the requirement to disclose costs and prices may not preclude them from quoting prices similar to those received in the past based on the fee curve. Therefore, a grantee's capability to negotiate effectively becomes paramount. While the regulations provide that a grantee may have another party negotiate on its behalf, there is no assurance or requirement that this be done. As a result, grantees who lack the needed expertise will probably continue to rely on consulting engineers and accept proposed fees or prices without meaningful negotiations.

Although our review did disclose weaknesses in grantee procurement practices for obtaining consulting engineer services, we are making no recommendations for further improvement at this time. As part of another ongoing review, we are making an assessment of the effectiveness of EPA's new procurement regulations in assuring that consulting engineer services are obtained at reasonable prices. Our proposed report will include an identification of ways in which the new regulations can be improved.

We believe, however, that actions can be taken to improve grantee procurement practices for obtaining construction contractor services. We recommend, therefore, that the Administrator, EPA, place greater emphasis on the use of smaller construction bid packages and separate and combined bidding techniques, such as those used in the construction of interceptor sewers and pumping stations.

## AGENCY COMMENTS AND OUR EVALUATION

EPA officials stated that EPA is somewhat constrained by OMB Circular A-102 because it tends to limit the procurement requirements a Federal agency can impose on grantees. The objective of OMB Circular A-102 is to establish standards for consistency and uniformity among Federal agencies in the administration of grant programs so as not to unduly burden State and local governments with conflicting requirements. EPA informed us that attachment 0 to the Circular, which sets standards for procurement under grants, lacks specific guidance necessary to be effective. According to EPA officials, there are few standards for contract negotiation and, as a result, the process is open to varied interpretation and abuses. EPA cited as an example the lack of a requirement for public announcement of requests for proposal or for cost or price evaluations of negotiated contracts. EPA was able, however, to obtain a "deviation" from OMB for the issuance of regulations that would be more specific than attachment 0. Although EPA would like to be more specific in its regulations, its officials informed us that they have to comply with OMB's policy to defederalized procurement practices of State and local governments.

We believe that EPA should continue to support OMB's efforts to achieve uniformity and simplification in the administration of grant programs by State and local governments. We believe, however, that EPA also has an obligation to issue administrative requirements which will maintain the fiscal integrity of a multibillion-dollar grant program, particularly where grant funds are expended by grantees primarily through contracts with third parties.

In commenting on our recommendation, concerning greater use of smaller packages and separate and combined bidding techniques, EPA officials were not convinced that savings would be achieved because additional administration costs might offset the savings obtained through lower prices on contracts awarded. However, they did agree that grantees who used such techniques would have greater assurance that they had received the lowest practicable prices. EPA officials stated that they would emphasize the use of such techniques to grantees and consulting engineers at the preaward and preconstruction conferences.

We believe EPA's emphasis on the use of such techniques will increase the number of grant projects employing those techniques in the future and should result in lower overall construction costs, even though administrative costs may offset the lower total prices to some extent.

## CHAPTER 4

### NEED TO IMPROVE EPA PROGRESS PAYMENT PROCEDURES

#### UNDER THE CONSTRUCTION GRANT PROGRAM

EPA regional offices were basing progress payment amounts on the total construction contractor billings to grantees even though grantees were retaining some of the amounts to assure performance by the contractor. As a result, we found instances where grantees had held sizable amounts of Federal funds for extended periods. Had the grantees invested these funds in interest-bearing accounts, significant amounts of interest revenue could have been returned to the Federal Government.

The additional interest cost to the Federal Government, caused by the practice of providing Federal funds to grantees a year or more in advance of the time that grantees plan to make payment to their contractors, is substantial. We estimated, for example, that for calendar year 1975 in region VII--one of the lowest-funded regions--the interest cost on such premature payments amounted to between \$297,000 and \$455,000.

Our review also showed that EPA, through its desk audits--reviews performed in the regional offices of documentation submitted by grantees--before making progress payments, identified many errors or improper items contained in grantee progress payment requests. We also noted that other errors and improper claims were not found during the desk audits and that the details of such audits differed among regions and reviewers.

EPA regional office reviews of grantee progress payment requests represent an important fiscal control primarily because grantees are not performing adequate reviews of consulting engineer and construction contractor billings as discussed in chapter 2.

#### PREMATURE PROGRESS PAYMENTS TO GRANTEES SHOULD BE ELIMINATED

We noted that EPA was making progress payments to grantees for the total amount of construction contractor billings even though the grantee retained a percentage of the amount himself to assure that the contractor satisfactorily completed the construction. At the time of our review, Public Law 92-500 and EPA regulations did not

expressly address what percentage of the Federal share of construction costs incurred were to be paid the grantee when the grantee retained a portion of the amount otherwise due the contractor. EPA did have, however, a policy memo which said that EPA should pay only the Federal share of the construction costs, less the amount of the retainage. The three EPA regional offices included in our review were not following this memo and were, instead, approving progress payments for the total amounts billed to the grantees by the construction contractors--not the net amounts paid by the grantees.

According to section 203(b) of Public Law 92-500,

"The Administrator shall, from time to time as the work progresses, make payments to the recipient of a grant for costs of construction incurred on a project. These payments shall at no time exceed the Federal share of the cost of construction incurred to the date of the voucher covering such payment plus the Federal share of the value of the materials which have been stockpiled in the vicinity of such construction in conformity to plans and specifications for the project."

EPA regulations set out its description of how the waste treatment construction grant program operates. Generally, installment payments of the Federal grant are to be made, for step 3 projects, upon request of the grantee and are to be based on the cost that the grantee incurs in the performance of the project.

To ensure that construction continues without interruption, EPA regulations authorize prompt progress payments to be made by grantees to prime contractors and by prime contractors to subcontractors and suppliers for eligible construction, material, and equipment costs incurred under a contract made pursuant to an EPA construction grant. EPA regulations further provide that a grantee may, at its discretion, retain a portion of the amount otherwise due the contractor, usually between 5 and 10 percent, to assure satisfactory completion of the project. The retained amounts are held until the contractor's work is accepted in accordance with the contract plans and specifications. EPA's regulations provide for retaining 10 percent until construction is 50 percent completed at which point the retainage can be reduced to 5 percent with satisfactory contractor performance.

Neither Public Law 92-500 nor the legislative history of the act discusses the progress payments or retention from progress payments mechanisms. None of EPA's regulations, at the time of our review, expressly addressed the issue of what percentage of the Federal share of construction costs incurred were to have been paid the grantee when the grantee retained a portion of the amount otherwise due the contractor.

Accordingly, specific guidance regarding whether EPA should have forwarded funds to grantees where the grantees did not forward the funds on to contractors was contained in a November 18, 1974, EPA Program Guidance Memorandum, which stated in part that:

"Payment of the Federal share should be made to grantees only for amounts which the grantee is currently obligated to pay. For example, where a grantee is entitled to retain 5% of the amount of a voucher, payment should be made by EPA only for the Federal share of the vouchered amount less the amount of the retainage. The retained amount should be included on a later voucher from the grantee at the time the grantee becomes obligated to actually pay the retained amount."

EPA's policy that it should pay only for the Federal share of the construction costs less the amount of the retainage was again restated in a February 5, 1976, memorandum from EPA's Assistant Administrator for Planning and Management, concerning the publication of subagreement regulations for construction.

EPA's policy, in our opinion, does not conflict with or thwart the primary purpose of section 203(b) of Public Law 92-500 to assure an orderly flow of Federal payments. The memorandum is reasonable, especially because it avoids giving those grantees that retain grant funds the temporary windfall use of the retained amounts. In addition, it is legally acceptable that the agency authorized to administer a statute be given broad discretion in interpreting the statute. Accordingly, we believe EPA's interpretation of section 203(b) of Public Law 92-500 was reasonable and should have been followed.

The three regional offices included in our review, however, were not following headquarters guidance in making progress payments to grantees. Rather, they were basing progress payment amounts on the total amounts billed to the grantees by construction contractors--not the net amounts paid by the grantees after deducting amounts retained.

Roseville, California, for example, awarded contracts totaling \$9.1 million in November 1974 for construction of treatment facilities. The grantee's first progress payment request dated June 1975--for \$1,096,796--was increased, by the State agency who reviews payment requests, by \$121,000 to include the amounts retained by the grantee. State instructions provide for including all costs whether or not paid. Both EPA and the State made payments to the grantee on the basis of inclusion of the retained amounts, but as of November 1976--18 months later--the retained amounts were not paid to the contractor.

Manchester, New Hampshire's, first progress payment request dated June 1974 for \$2.5 million excluded about \$300,000 in retainage. The regional office revised the request to include the amounts withheld by the grantee in computing its progress payment. At August 1975 about \$1.25 million had been paid by EPA on amounts retained by the grantee which had not been released by the grantee at May 1976.

EPA's Office of Audit has taken a position of agreeing with headquarters policy that progress payments should be made only for amounts the grantee is obligated to pay. For example, the Office of Audit reported in March 1976 that in 22 of 30 step 3 grants reviewed in region V (Chicago), grantees had been reimbursed for amounts retained from contractor payments. They concluded that grantees should not be reimbursed for retained amounts until the payments are actually made. Region V concurred with the audit findings and stated corrective action had been implemented.

Subsequent to our review, EPA issued a technical amendment to its regulations, which became effective on December 29, 1976, to give its previously issued memorandums the force of law. The new regulations provide, in part, that:

"The grantee shall be paid the Federal share of allowable projects costs incurred within the scope of an approved project and which the grantee is currently obligated to pay, \* \* \* up to the grant amount set forth in the grant agreement and any amendments thereto." (Emphasis added.)

According to EPA officials, the change to its regulations was intended to clarify that EPA should only pay grantees for those amounts that the grantee promptly pays its contractors. For instance, if the contract governing the relationship between the grantee and the contractor provides for monthly progress payments with a retainage of 10 percent,

then EPA should only pay for the Federal share of the construction costs less the amount of the retainage. In this context, the retained amount, using the language of the regulation, is not "currently obligated," even though the contractor bills the grantee for the full amount.

Although EPA headquarters officials informed us that the new regulations prohibit the payment of "retainage" to grantees on progress payments, EPA's region I is continuing to pay retainage to grantees in those instances where the grantee was already receiving retainage on payment requests before the regulation. For grantees receiving new grants subsequent to the regulation, region I officials stated that they have stopped paying retainage on these grants. We brought this matter to the attention of EPA headquarters officials and, according to them, the practice should be stopped and they plan to followup on this matter with region I officials.

#### LOSS OF INTEREST TO FEDERAL GOVERNMENT

As noted in the preceding section, we found instances where grantees had held sizable amounts of Federal funds for extended periods--18 months in Roseville, California, and 9 months in Manchester, New Hampshire. Had the grantees invested these funds in interest-bearing accounts, significant amounts of interest revenue could have been returned to the Federal Government.

For example, region VII--the lowest funded of the three regions included in our review--made an estimated \$15.2 million in payments for retained amounts during 1975. The estimate was developed on a statistical sampling basis after identification of all progress payments made during that year under construction grants. We estimate that between \$297,000 and \$455,000 in interest revenue could have been earned for the Federal Government if these funds had been invested. Unfortunately, however, there is no requirement that the grantee has to deposit grant funds in interest-bearing accounts when disbursement to the construction contractor is delayed. EPA regulations, on the other hand, do provide that interest earned on grant funds by units of local governments must be credited to the United States. In addition, Comptroller General decisions issued April 16, 1976, and July 13, 1976, say that, as a general rule, grant funds received by grantees should be promptly applied to the purpose for which furnished.

If grantees continue to receive millions of dollars for construction contractor retainage, which will not be disbursed until a later date, the potential exists for grantees to invest these funds in interest-bearing accounts.

Regions which have been reimbursing grantees for construction costs incurred have not, however, insured that interest be earned by grantees on invested funds and that such interest be forwarded to the Federal Government.

For the projects included in our review, we did not identify any instances where grantees had returned interest earned on invested funds to the Federal Government. In addition, an EPA headquarters official stated that he was unaware of any interest that had been returned.

Although we did not determine the potential amounts of interest earned on retained funds for specific projects, the interest revenue that may have been generated could be substantial. Because the Federal Government must borrow to pay its obligations, the interest on the funds retained by the grantees would be enormous in terms of EPA's nationwide construction program.

#### EPA REVIEW OF PROGRESS PAYMENT REQUESTS COULD BE IMPROVED

Our review showed that EPA, through its desk audits--reviews performed in the regional offices of documentation submitted by grantees--before making progress payments, has identified many errors or improper items contained in grantee progress payment requests. It showed also that other errors and improper claims were not found during the desk audits and that the detail of such audits differed among regions and reviewers. Although EPA instructions call for periodic reviews of payment requests, the instructions indicate that, to avoid unnecessary payment delays, judgement will be required as to the frequency of detailed checks of payment requests and supporting documents. The instructions state that if a problem is discovered after a payment is made, it can be resolved on a later payment.

Grantees, as described in chapter 2, have not been performing effective reviews of consulting engineer and construction contractor billings included in requests for progress payments sent to EPA. Rather, they appeared to rely on the integrity of their consulting engineers and on EPA to identify erroneous cost items. EPA's desk audit procedures, therefore, take on added significance in the

fiscal control over progress payments. The following examples illustrate the types of errors and improper claims that were not detected by desk audits.

The Department of Housing and Urban Development (HUD) made loans to municipalities for purposes of financing water pollution studies and improvements. Grantees were not required to repay the loans unless the preliminary engineering studies were used in the design phase and construction actually started. Informal policy in EPA region I, therefore, was to reimburse grantees for preliminary engineering studies financed with HUD funds only when evidence was provided which supported the repayment of the loan to HUD. Yet, region I personnel had not consistently applied this procedure.

The above procedure was followed in Wareham and New Bedford, Massachusetts, which received HUD loans of \$15,000 and \$165,920, respectively, for financing preliminary engineering studies. Although the grantees submitted these costs for reimbursement under the EPA grant, region I excluded them from payment until evidence was provided that the loans had been repaid. In the case of New Bedford, \$5,000 of the loan had not been repaid, which HUD allowed the grantee to keep. EPA intended to reduce final eligible grant costs by the \$5,000.

In Grafton and Maynard, Massachusetts, however, the regional office made progress payments to both grantees which included amounts for HUD loans of \$9,000 and \$21,650, respectively, even though the grantees had not repaid the loans to HUD. Region I officials explained that they did this because the 1972 amendments provided for reimbursement to grantees based on "costs-incurred" and they believe this permits payment by EPA without regard to whether grantees have repaid the loan.

We do not believe that a study paid for by HUD through an advanced loan should be construed as a cost-incurred by the grantee and shared in by EPA. EPA's construction grant program regulations specify as unallowable those costs for which payment has been or will be received under another Federal assistance program.

During our review we noted also that in processing Fall River, Massachusetts', third request for progress payment in June 1973 under a \$1.2 million grant, the EPA reviewer did not check the cumulative payments of \$107,000 against the consulting engineer's contract ceiling of \$68,000 for supervision of construction. As a result, EPA erroneously participated in the payment of the \$39,000

overpayment made the grantee. We brought the error to the attention of regional officials who agreed with the discrepancy and stated they would correct the overpayment in the final project payment.

Because the regional reviewer did not check the engineer's invoices for compliance with contract terms, EPA erroneously participated in \$24,800 of engineering costs submitted by Maynard, Massachusetts, in its first request for progress payment dated November 1, 1974. Without EPA's approval, which is required, the grantee in 1973 negotiated an amendment to its consulting engineer agreement which increased fee percentage and hourly rates. EPA approved the progress payment and reimbursed the grantee at the increased rates. Had the reviewer checked the rates submitted against the contract rates, the increase would have been identified and questioned. The grantee was unable to provide a justification for the increased rates made in 1973. As a result of our bringing this matter to EPA's attention, EPA planned to correct the discrepancy in the final progress payment request.

Region IX participated in \$49,286 erroneously included in Tahoe-Douglas District, Nevada's 15th request for progress payment. According to the grantee, this amount was applicable to services provided by a consulting engineer which were unrelated to the EPA grant project and which were therefore ineligible. The amount reimbursed by EPA was \$36,964. EPA relies on interim and final audits to identify errors or to determine when improper progress payments have been made. However, final audits are sometimes not performed until several years after construction has been completed. Also there is no assurance that all errors and improper progress payments will be identified. Interim and final audits, we believe, should not be a substitute for sound fiscal control during the administration of the project. Final audits may not identify discrepancies because project records and documentation may be difficult or impracticable to obtain after such a long time interval. Until grantees develop the capability to perform adequate reviews of consulting engineer and contractor billings, the EPA desk audit will remain an essential fiscal control in the program.

Therefore, we believe that EPA's desk audit process should be improved by providing written procedures to guide reviewers and eliminate inconsistencies among regional offices. After our field work, region I recognized the need for written guidelines for reviewers and developed written procedures.

## CONCLUSIONS AND RECOMMENDATIONS

Some of EPA's regional offices were computing progress payments to grantees on costs that include amounts withheld by the grantee from construction contractor billings. This practice is contrary to regulations provided by EPA headquarters. We do not believe it is proper to base progress payment amounts to grantees on total construction-contractor billings in instances where the grantee retains a percentage of the amount due the contractor to assure satisfactory completion of the contract. Such a practice results in grantees holding large sums of Federal funds for extended periods of time. The increased cost to the Federal Government, in added interest costs, is considerable because it may be a year or more before the grantees make payment of these amounts to their contractors.

Our review showed that errors were sometimes not being detected during EPA desk reviews of progress payments. They are an important fiscal control that can reduce erroneous progress payments to grantees. Because grantees sometimes perform inadequate reviews of construction contractor billings, ineligible costs are sometimes included in a grantee's progress payment request to EPA. Accordingly, we believe there is a need to reemphasize to regional desk reviewers the importance of the progress payment review process and the need for closer scrutiny of payment requests.

We recommend that the Administrator, EPA:

- Determine whether any significant amounts of interest were earned by grantees on Federal funds retained from construction contractors and, if so, require that such interest be credited to the Federal Government.
- Until such time that grantees have adequate financial management accounting systems, reemphasize to regional desk reviewers the importance of the progress payment review process and the need for closer scrutiny of payment requests.

## AGENCY COMMENTS AND OUR EVALUATION

EPA officials informed us that they believe EPA has the option to pay or not pay retainage amounts to grantees, but has adopted the more conservative approach and required that retainage amounts not be paid to grantees. However, this

approach was only casually mentioned in a guidance memorandum to the regions. EPA's regulations are ambiguous and permit the option. Although EPA's regulations published in the December 29, 1976, "Federal Register" state that the grantee shall be paid the Federal share of allowable project costs which the grantee is currently obligated to pay, some EPA region officials continue to pay retainage amounts to grantees who received grants before the effective date of the regulation. We do not believe that because the grant was made before the change in EPA's regulations, region I should continue to pay retainage amounts. These payments should have been stopped as of the effective date of the regulation. We brought this matter to the attention of EPA headquarters officials and they have agreed to have this practice stopped in the future.

EPA officials also stated that identifying all interest earned by grantees on retainage paid in the past would be extremely difficult and perhaps impossible because many grantees do not separately identify and account for Federal cash received.

We agree that it may be extremely difficult for EPA to identify all interest earned by grantees on retained grant funds. In view of the potentially large amounts of funds involved, however, especially with respect to larger grants, we believe that EPA has a responsibility to insure that such funds are returned to or credited to the Federal Government. Therefore, we believe that EPA should attempt to identify those grants where significant amounts of earned interest may be involved and take action to recover such funds.

EPA officials stated that although the trend is to reduce Federal reviews and paperwork, the need for desk reviews still serves as an important control and they will continue to emphasize its importance. As soon as improvements are achieved in grantee financial management practices, however, EPA plans to substantially phase out the desk audit function and rely on interim and final audits.

STATE PARTICIPATION IN ELIGIBLE  
PROJECT COSTS AS OF OCTOBER 1977

<u>Region</u>	<u>State</u>	<u>Percent</u>
I	Connecticut	15
do.	Maine	15
do.	Massachusetts	15
do.	New Hampshire	20
do.	Rhode Island	a/ 15
do.	Vermont	15
II	New Jersey	8
do.	New York	12.5
do.	Puerto Rico	b/ 25
do.	Virgin Islands	b/ 25
III	Delaware	10
do.	Maryland	12.5
do.	Pennsylvania	None
do.	Virginia	c/ 5-15
do.	West Virginia	None
do.	Dist. of Col.	b/ 25
IV	Alabama	None
do.	Florida	None
do.	Georgia	None
do.	Kentucky	None
do.	Mississippi	12.5
do.	N. Carolina	12.5
do.	S. Carolina	None
do.	Tennessee	25 (loan)
V	Illinois	None
do.	Indiana	10
do.	Michigan	5
do.	Minnesota	15
do.	Ohio	None
do.	Wisconsin	c/ 5-15
VI	Arkansas	None
do.	Louisiana	None
do.	New Mexico	12.5
do.	Oklahoma	None
do.	Texas	None

## APPENDIX I

## APPENDIX I

<u>Region</u>	<u>State</u>	<u>Percent</u>
VII	Iowa	5
do.	Kansas	None
do.	Missouri	15
do.	Nebraska	12.5
VIII	Colorado	5
do.	Montana	None
do.	N. Dakota	None
do.	S. Dakota	5
do.	Utah	None
do.	Wyoming	None
IX	Arizona	5
do.	California	12.5
do.	Hawaii	10
do.	Nevada	None
do.	American Samoa	b/ 25
do.	Tr. Terr. of Pac. Isld.	b/ 25
do.	Guam	b/ 25
X	Alaska	12.5
do.	Idaho	15
do.	Oregon	None
do.	Washington	15

a/May decrease due to lack of funds.

b/Applicant same as State.

c/Variable.

(08727)